TRACKS 2006 ATLANTA, GA

Implementing The Tracking Network

breakout ABSTRACT

Abstract No. 43

TITLE

BIOMONITORING FOR METALS IN CHILDREN'S BLOOD USING EXISTING BLOOD LEAD SPECIMENS

TRACK

Network Content

OBJECTIVES

Learning objective: to describe the potential for building a biomonitoring program using existing childhood blood lead specimens, and the challenges to developing such a program.

SUMMARY

Under Maine state law, all childhood blood specimens to be analyzed for lead must be submitted to the State Public Health Laboratory. Maine has used a portion of its public health emergency preparedness funding to enhance its public health laboratory capacity to analyze multiple metals in urine samples. Under the principal of "full use" of this enhanced biomonitoring capacity, Maine has sought to develop a pilot biomonitoring program for metals in children's blood using existing childhood blood specimens submitted for lead analysis. This presentation will discuss the challenges and accomplishments necessary to developing a plan for this biomonitoring project; these include: a) building a team of laboratorians, toxicologists, and epidemiologists; b) identifying candidate metals of interest; c) developing a laboratory method for analyzing venous blood specimens for lead, cadmium, mercury, arsenic, uranium, manganese, antimony and selenium using a ICP/MS; d) building capacity to rapidly switch between urine and blood specimens: and e) confronting the issue of informed consent with existing blood specimens. Method limits of detection and results from comparing blood lead results using the new method with those obtained using GFAA will be presented.

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